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Crossing the threshold: reflective practice in information literacy development

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Abstract

Do we think enough about what we are doing as information literacy (IL) practitioners? The relationship between reflection and IL development is well documented in academic and professional literature, particularly in the context of teaching librarians using reflective activities to enable learners to think critically about their IL abilities. Parallel literature from education and other fields has promoted the concept of the reflective or thinking practitioner. Drawing on literature and theory from various domains, we review the concepts of reflection and reflective practice, and discuss their application and take-up in library and information work, with particular reference to the teaching role of librarians in the context of developments in critical information literacy. Our review suggests that reflective practice is generally recognised as an important dimension of library and information work, but is currently underdeveloped in comparison with other professions. Using terminology and theory from the pedagogical arena, we contend that critical reflection needs to be elevated to the special status of a *threshold competence* for library and information professionals generally and for IL practitioners in particular. We also argue that our profession needs purpose-designed domain-specific advice and guidance on reflective practice, to support initial and continuing education of library and information workers, and we conclude by identifying areas where further research is required to clarify the role of reflection in library and information research and evaluation, to explore existing approaches to reflection in professional education programs, and test the transferability of reflective methods used in other professional domains.

Keywords

critical literacy; critical reflection; information literacy; professional competence; reflective practice; reflectivity;

1. Introduction

Reflection is the key to effective professional practice, which can also help us make sense of and achieve coherence in the different areas of our individual careers and personal lives. Being a reflective practitioner means using reflection to enhance our practice within and across the separate and related domains of professional activity. Reflection can be a challenging process, but it can also be enabling, rewarding, and empowering. We can engage in reflection individually and collectively, in private spaces, regular workplaces, and professional venues, but do we have the tools, techniques, and methodologies to practise reflection effectively and productively? In particular, do we have the frameworks, know-how, and resources in our own professional community of library and information science/services to support reflective practice in mission-critical areas such as information literacy (IL) and library assessment in the dynamic, complex pluralist environments of the 21st century digital world?

Reflective practice is now recognised as a defining characteristic of professional work; it features in many UK Subject Benchmark Statements for graduates of professional degree programs

(Brockbank & McGill, 2007; Finlay, 2008) and is often a formal requirement for obtaining and retaining professional credentials – such as professional registration with CILIP, which requires candidates to reflect continually on their experiences and learning to gain professional status). Reflective practice and the related ideas of critical reflection and reflexivity are closely associated with education, learning, and research (Alvesson & Skoldberg, 2009; Brockbank & Gill, 2007; Finlay & Gough, 2003), and thus particularly relevant to IL practitioners, especially those working in higher education. Scholars in our area have made these connections (Booth, 2011; Jacobs, 2008; McGuinness, 2011; Vezzosi, 2006); and ACRL (2016) has emphasised critical self-reflection in its new *Framework for Information Literacy*, placing it at the heart of its reconceptualization of the field. The importance of the work context of reflection has resulted in the development of domain-specific guidance and handbooks, particularly for practitioners in the caring and helping professions. However, in the library and information field, writers typically reference models from other fields and/or offer only rudimentary guidance.

Reflection is a deceptively simple idea that is easy to grasp at a basic level, but may be hard to put into practice in a professional context. Put simply, it is “the ability to think about the past, in the present for the future” (Carroll, 2009, p.43). An alternative more complex definition presents reflection as “the process of critically assessing the content, process, or premise(s) of our efforts to interpret and give meaning to an experience” (Mezirow, 1991, p.104). Others confirm that reflection is a demanding activity, requiring a subtle combination of knowledge, skills, and abilities: “knowledge of reflective methods alone is not sufficient. There must be a union of skilled method with attitudes” (van Manen, 1995, p.34). Practitioners often struggle with the personal nature and analytical demands of reflective writing, which may seem in tension. There is also confusion over the use of terms such as “reflection”, “critical reflection”, “reflectivity”, and “reflexivity”, which have been conceptualised and defined in diverse (sometimes contradictory) ways, and in turn resulted in the development of multiple models and typologies of reflective practice by successive generations of scholars. Another complication is the many related terms and concepts whose meanings overlap with reflective practice – for example, problem-solving, action research, experiential learning, critical thinking, and mindfulness; indeed, the only librarianship book wholly devoted to reflection, *Becoming a Reflective Librarian and Teacher* (Reale, 2017), invokes mindfulness in its subtitle, *Strategies for Mindful Academic Practice*.

A recent UK survey of library and information practitioners confirmed the benefits and value of reflection for the profession, but found significant barriers to practical engagement, identifying a need for more support, including clearer definition of the concept, more effective training, and fuller guidance “to enable staff to find methods of reflection that are appropriate for their particular needs and suited to their personal style” (Greenall & Sen, 2016, p.146). This survey supports Koufogiannakis’s (2010, p.2) earlier contention that “coming up with concrete strategies for developing reflection within our profession needs to be more widely discussed and articulated”.

The purpose of the ongoing investigation of which the present study forms the preliminary stage of the first phase is to explore the phenomenon of reflective practice for the library and information science/services community with the aim of informing its development in the profession, by using evidence from the field and from cognate disciplines to describe and elaborate the concept, to understand and extrapolate its application to our domain, and to appraise and evaluate strategies for advancing reflective practice in the profession. The goal of this initial stage is to scope the topic, using a selective review of related literature to identify key concepts, theories, models and resources available within and beyond the library and information arena; outline needs within the profession and gaps in existing provision; and clarify objectives for a future work program.

IL practitioners are used here as a case of intrinsic interest to the readership of the *Journal of Information Literacy* and the membership of its sponsor, the Information Literacy Group of the Chartered Institute of Library and Information Professionals (CILIP). However, IL specialists can also serve as an instrumental case study to facilitate our understanding of the uses and demands of reflective practice, and provide insights into the wants and needs of library and information professionals more generally. Looking at reflective practice from the perspective of IL specialists

offers more than an “apt illustration”, and brings us closer to the types of inquiry described by Mitchell (1983, pp.193, 196) as “heuristic case studies” and “plausibility probes”. Heuristic cases are “deliberately used to stimulate the imagination towards discerning important general problems and possible theoretical solutions”, while plausibility probes are “used specifically to test interpretive paradigms which have been established” by previous studies or other procedures.

The paper begins by introducing key concepts and theorists from the world of reflective practice to orientate readers for an extended discussion of reflective practice in library and information work, which is based on a selective review of primary and tertiary literature, concentrating on the use of reflection for continuing professional development, by teaching librarians, and in IL education. The final section considers the implications of the messages from the literature and then concludes with three suggested strategies for action.

2. Conceptual overview and theoretical background

Reflection means different things to different people. There is no standard definition and no consensus on the subject and so newcomers to the field may find the range of definitions encountered a barrier to engaging in the practice. Put simply, “Reflection is the ability to think about the past, in the present for the future” (Carroll, 2009, p.43); but, as noted by one eminent scholar in the field, “The concept of reflection is challenging and may refer to a complex array of cognitively and philosophically distinct methods and attitudes (van Manen, 1995, pp.33-34). People may use the word ‘reflect’ casually without thinking about it in both everyday conversation and more formal writing, but there is also a large and growing literature on the topic that gives particular meanings to terms such as ‘reflect’, ‘reflection’, and ‘reflective practice’. British writer, Jennifer Moon (2006, pp.37-38) offers “a commonsense view of reflection”, which she then elaborates to cover its use in an academic context, such as reflective writing in a classroom setting or in a learning journal.

Reflection is a form of mental processing – like a form of thinking – that we use to fulfil a purpose or to achieve some anticipated outcome or we may simply ‘be reflective’ and then an outcome can be unexpected. Reflection is applied to relatively complicated, ill-structured ideas for which there is not an obvious solution and is largely based on the further processing of knowledge and understanding that we already possess.”

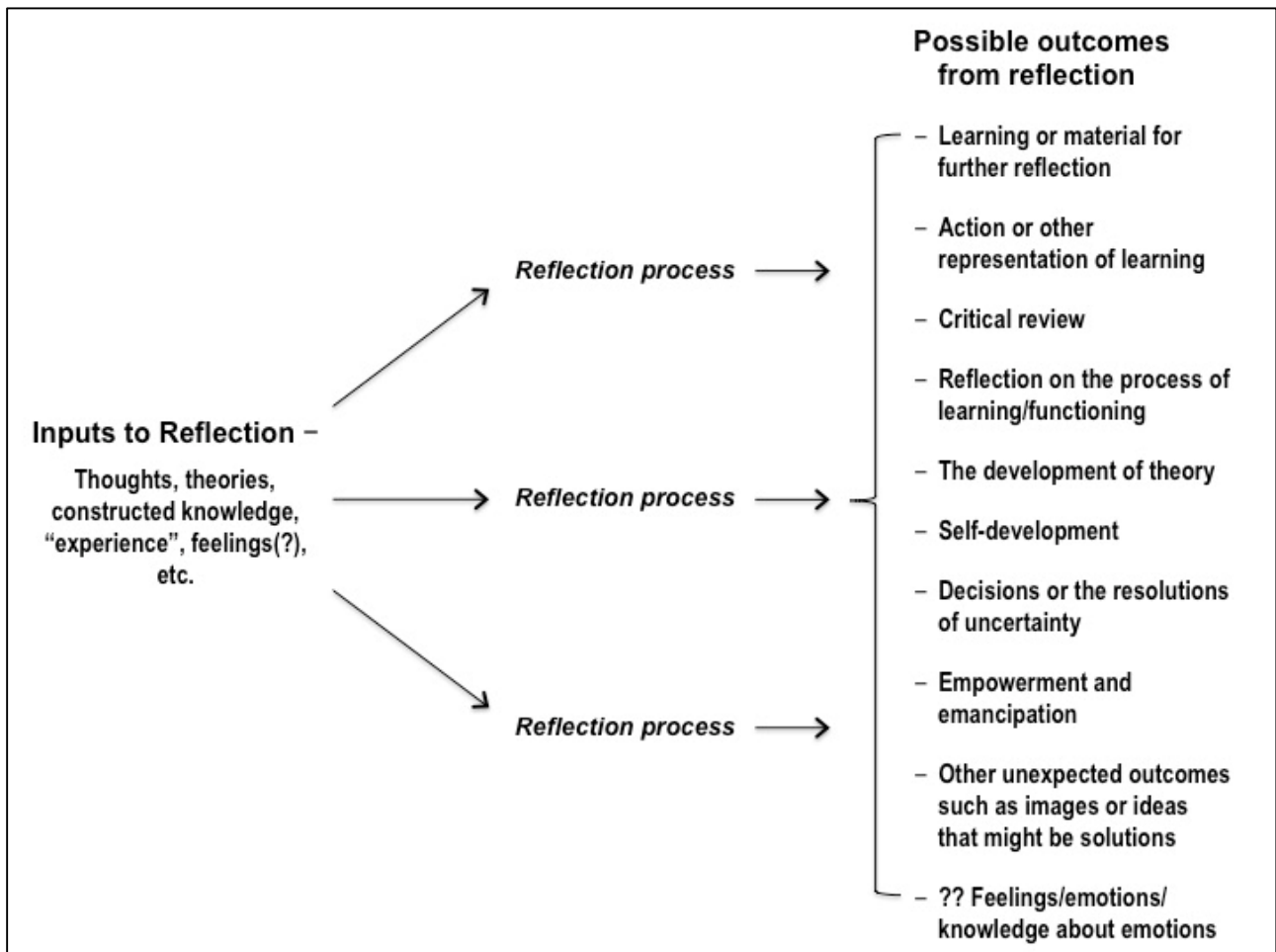
“Reflection/reflective learning or reflective writing in the academic context is also likely to involve a conscious and stated purpose for the reflection, with an outcome specified in terms of learning, action or clarification. It may be preceded by a description of the purpose and/or the subject matter of the reflection. The process and outcome of reflective work is most likely to be in a represented (e.g. written) form, to be seen by others and to be assessed. All of these factors can influence its nature and quality.

As well as clarifying that reflection properly construed usually has a purpose, Moon (2001, p.5) provides a useful overview of typical inputs and possible outcomes from reflection (in an academic or professional context) in graphical form. Figure 1 reproduces her input/outcome model, which illustrates how “reflection is a simple process but with complex outcomes that relate to many different areas of human functioning” and “different contexts...that often influence our understanding of its meaning” (Moon, 2001, p.4).

The foundational literature on the subject spans multiple disciplines, including education, philosophy, psychology, and sociology, with leading theorists often drawing on two or more academic domains. The situation is complicated by the development of a continually expanding array of variants on the basic concept, as academic and professional thought leaders have sought to elaborate their particular interpretations of what it means to reflect or to do reflection and to be reflective, in educational and other contexts. Newcomers will also come across additional related terms used interchangeably by some authors, but precisely differentiated by others. For example, ‘reflection’ can be characterised qualitatively as active, analytical, appreciative, critical,

deliberative, descriptive, dialogic, emancipatory, empathetic, evaluative, external, imaginative, interactive, internal, narrative, percipient, personalistic, practical, relational, systemic, technical, or transcendent, and/or explicitly related to action, content, process, premise, self, or strengths; it can also be differentiated temporally as anticipatory, preactive or prospective; contemporaneous; or recollective, retroactive or retrospective (Brockbank & McGill, 2007; Carroll, 2009, 2010; Conway, 2001; Cowan, 1998; Ghaye, 2011; Hatton & Smith, 1995; Mezirow, 1991, 1998; Taylor, 2010; Valli, 1997; van Manen, 1977, 1991).

Figure 1: An input/outcome model of reflection (Moon, 2001, p.5)



Reflectivity similarly can be used either as shorthand for reflective activity in general, or more specifically to “the process of reflecting on the ‘I’ who is reflecting. ...the person doing the reflection” (Carroll, 2009, p.42), or as Mezirow (1981, p.12) explains, “We can simply become aware of a specific perception, meaning or behavior of our own or of habits we have of seeing, thinking or acting”, describing such self-awareness as “an act of *reflectivity*”. Mezirow (1981, pp.12-13) goes on to define several dimensions of reflectivity, where *affective*, *discriminant*, and *judgmental reflectivity* represent successive levels of awareness or consciousness, and *conceptual*, *psychic*, and *theoretical reflectivity* move the learner towards a critical awareness or critical consciousness (“becoming aware of our awareness’ and critiquing it”) and the perspective transformation that characterises *critical* reflectivity.

Reflexivity brings further terminological and conceptual difficulties: Fook and Gardner (2007, pp.27, 28) begin with two simple characterizations drawn from other authors, “a turning back on itself” and “the ability to look both inwards and outwards to recognize the connections with social and cultural understandings”, before offering another broader interpretation from their earlier work as “the ability to recognize that *all* aspects of ourselves (including physical and bodily aspects) and

our contexts influence the way we research (or create knowledge)". D'Cruz, Gillingham and Melendez (2007) provide a useful analysis of the different ways 'reflexivity', 'critical reflection' and 'reflectivity' have been used in social work literature, identifying three distinct variant interpretations of reflexivity found within a single discipline, which illustrates the challenges faced by practitioners.

2.1 Seminal thinkers

Educational philosopher John Dewey is universally regarded as the originator of the concept of reflection in an educational context, which he characterises as a problem-solving activity: "Demand for the solution of a perplexity is the steadying and guiding factor in the entire process of reflection (Dewey, 1910, p.11). Dewey (1910, pp.57, 72) describes reflection as "turning a topic over in various aspects and in various lights so that nothing significant about it shall be overlooked", and then presents reflective thinking as a process involving "five logically distinct steps":

- (i) a felt difficulty;
- (ii) its location and definition;
- (iii) suggestion of possible solution;
- (iv) development by reasoning of the bearings of the suggestion;
- (v) further observation and experiment leading to its acceptance or rejection.

Dewey's (1910, p.6) definition of *reflective thought* is often quoted as a starting point for discussion of the concept:

Active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends, constitutes reflective thought.

Brazilian educator Paulo Freire is generally credited with the development and foregrounding of the critical (and socio-political) dimension of reflective thinking, as the pioneer of a form of *critical* reflection involving continuous interplay between transformative reflection and action. His seminal 1970 book, *Pedagogy of the Oppressed*, a foundational text for the *critical pedagogy* movement, argues for replacement of the transmission model of teaching (termed "the banking concept") with a problem-posing method in which both students and teachers engage in reflection as critical co-investigators, "simultaneously reflecting on themselves and on the world":

In problem-posing education, people develop their power to perceive critically *the way they exist* in the world *with which* and *in which* they find themselves; they come to see the world not as a static reality but as a reality in process, in transformation... Hence, the teacher-student and the students-teachers reflect simultaneously on themselves and the world without dichotomizing this reflection from action, and thus establish an authentic form of thought and action (Freire, 2000, p.83).

The Dewey and Freirian conceptions of reflection are both problem-based and action-oriented, but Freire (2000, pp.87, 88, 128) makes (transformative) action integral to and simultaneous with the process of reflection, describing their relationship as "radical interaction", later using the term "action-reflection", and explaining that "Action and reflection occur simultaneously", and also that (the act of) "Critical reflection is also action" in itself (if, for example, critical analysis of reality identified a particular form of action as inappropriate or infeasible at that time).

However, it was philosopher Donald Schön (1983; 1987; 1991), with his broader interests in organization development and professional learning, who is particularly associated with the more widespread promotion of reflective practice to professions beyond the education sector through his seminal books on *The reflective practitioner* and *Educating the reflective practitioner*, and his set of case studies illustrating *The reflective turn*. Schön is best known for his distinction between reflection *in* action (i.e., thinking about the effectiveness of what we *are doing* when we are doing it with a view to making any changes needed during the event) and reflection *on* action (i.e., thinking about what we *have done*, evaluating its effectiveness, and thinking about how it could or should

have been done differently after the event); but he also made a significant contribution to the promotion and validation of research by practitioners, particularly to development of the scholarship of teaching, as one of the new forms of scholarship promoted in the influential 1990 Boyer report. Schön (1995) links the scholarship of teaching to both Dewey's (1910, 1933) descriptions of reflective inquiry and Kurt Lewin's (1946) concept of (reflective) action research. Schön's emphasis on the importance of the tacit knowledge of practitioners, represented by his notion of *knowing-in-action* (also referred to as "intelligence-in-action") was an important contribution to the continuing debate on the rigour of qualitative methods and the quality of practitioner research. Schön (1995, pp.28, 29, 34) specifically discusses "the dilemma of rigor or relevance" experienced by professional practitioners, who feel forced to choose between research methods demonstrating scientific rigour and "technical rationality", and inquiry strategies characterised by their practical relevance and "intuitive artistry"; and he advances a compelling argument for "an epistemology of practice that takes fuller account of the competence practitioners sometimes display in situations of uncertainty, complexity, uniqueness, and conflict", which he later describes as an "epistemology of reflective practice". His concept of reflection-*in-action* thus "acknowledges the tacit processes of *thinking* which accompany *doing*, and which constantly interact with and modify ongoing practice in such as way that learning takes place" (Leitch & Day, 2000, p.180).

Published discussion of reflection and reflective practice invariably references one or more of these three seminal thinkers. Lyons's (2010a) *Handbook of Reflection and Reflective Inquiry* opens with a review of key historical influences on the conceptualization and operationalization of reflective inquiry that includes a comparative tabulation of their characterization of the concept, which the editor suggests can be used to identify different historical entry points of a profession into reflective inquiry, and the theoretical and practical emphases likely to characterise its approach to reflection. Table 1 is adapted from the two versions of the table presented (Lyons, 2010b, pp.2, 19).

Table 1: Theoretical development of reflective inquiry (after Lyons, 2010b)

Theorist	Characterization	Learning is...
Dewey (1910, 1933) What is reflective inquiry?	Reflection as thinking/inquiry	learning to think
Freire (1970, 1973) Why is critical inquiry necessary?	Reflection as critical consciousness and transformative action	interrogating the political, social, and cultural contexts of learning and living
Schön (1983, 1987) How and what do we know?	Reflection <i>on</i> action and reflection <i>in</i> action as knowing	making sense of experience through a dialogue of thinking and doing

2.2 Theoretical development

Subsequent authors have reviewed, critiqued, extended, and developed the terms and concepts articulated by these seminal thinkers. Several scholars have viewed Schön's bipartite model of reflection and cognition as incomplete, or having "a temporally truncated bias", and have argued for "a more temporarily distributed conception of reflection" (Conway, 2001, pp.89, 102). Notable examples include phenomenologist Max van Manen (1991, 1995), who elaborates a tripartite (past, present, and future-oriented) model:

The thinking *on* or about the experience of teaching and the thinking *in* the experience of teaching seem to be differently structured. *Retrospective reflection* on (past) experiences differs importantly from *anticipatory reflection* on (future) experiences ... [and] *contemporaneous reflection* in situations allows for a 'stop and think' kind of

action that may differ markedly from the more immediate 'reflective' awareness that characterises, for example, the active and dynamic process of a class discussion, a lecture, a conflict situation, a monitoring activity, a one-on-one, a routine lesson, and so forth (van Manen, 1995, p.34).

In addition, van Manen (1995, pp.41, 42) lays out his own epistemology of reflective practice, which follows Schön in recognizing and problematizing the traditional theory-practice divide, but offers an alternative perspective, a third way, represented in the context of teaching as "pedagogical thoughtfulness and tact", and then elaborated as "The epistemology of tact as practical acting". Presenting tact as "a spontaneous bridge or link between theory and practice" and "a kind of knowing, an active confidence", van Manen (1995, pp.43, 45) explains how it also gets over the knowledge/skills divide:

Tact can neither be reduced to some kind of intellectual knowledge base nor to some set of skills that mediates between theory and practice. Rather, a third option is offered in the realization that tact possesses its own epistemological structure that manifests itself first of all as a certain kind of acting: an active intentional consciousness of thoughtful human interaction.

However, van Manen (1995) also recognises here that by promoting the model of the reflective practitioner as thoughtful and self-confident actor, he is arguably calling into question the requirement for critical-reflection-in action as a *modus operandi*, or at least the emphasis given to critical reflection as distinct from thoughtful action.

Another scholar, British educationalist John Cowan (1998; 2006), similarly extended Schön's model to include reflection-for-action as an additional step (or loop) in his own composite model (presented as a diagram). Cowan combines Schön's conception of reflection with psychologist David Kolb's (1976, p.22; 1986, pp.21, 42) conception of (learning) development from his classic four-stage experiential learning cycle (concrete experience, reflective observation, abstract conceptualization, active experimentation), which is in turn based on the Lewinian model of action research and laboratory training. Using the model of a spring, rather than the more common cycle or spiral, Cowan's diagram inserts reflection for, in and on action into a sequence of prior, exploratory, consolidatory and further experiential actions/activities, and "thus highlights and combines the different features of Kolbian and Schonian reflection" (Cowan, 2006, p.53).

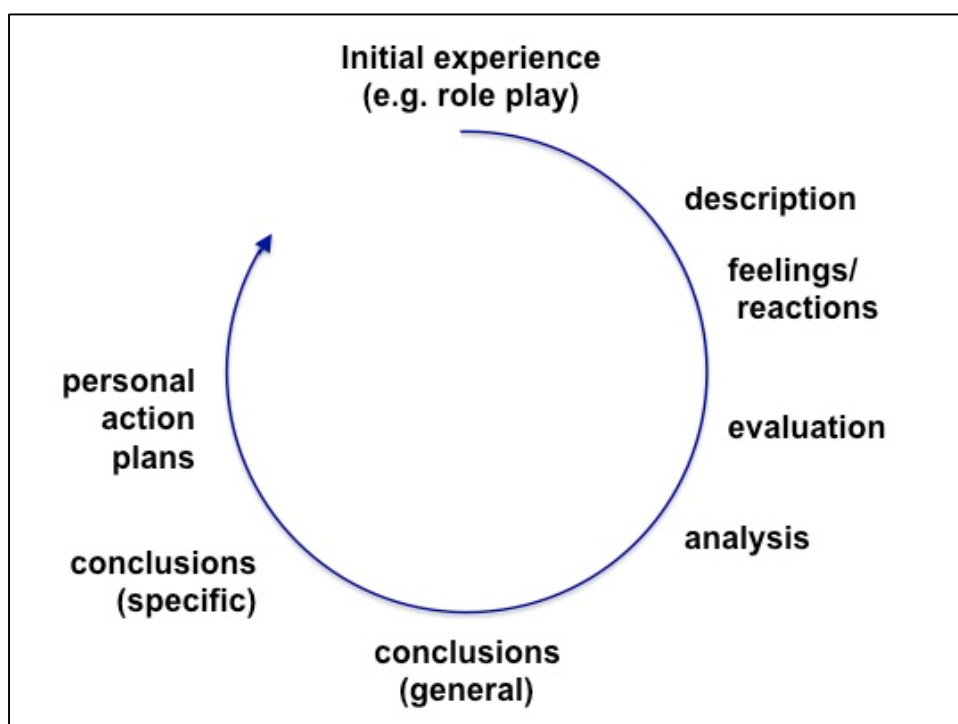
Many commentators use such temporal or chronological models to frame guidance for practitioners as a means of defining different kinds of reflection and suggesting in practical terms how reflection can be incorporated into their everyday practice. Table 2 is based on a tabulation of four chronologically differentiated kinds of reflection provided by Tony Ghaye (2011, p.6) in the review of major developments in reflective practice that introduces his book, *Teaching and Learning through Reflective Practice* (supplemented with additional source references).

Table 2: Four common views of reflection (after Ghaye, 2011)

Kinds of reflection	Sample references	Meanings
Reflection-IN-action (active, contemporaneous or interactive reflection)	Schön (1983, 1987) van Manen (1991, 1995)	1. In a particular workplace 2. Thinking on your feet, improvisation
Reflection-ON-action (recollective, retroactive or retrospective reflection)	Schön (1983, 1987) van Manen (1991, 1995)	1. After the event 2. On something significant
Reflection-FOR-action (anticipatory, preactive or prospective/imaginative reflection)	Conway (2001) Cowan (1998, 2006) van Manen (1991, 1995)	1. For a reason or particular purpose 2. Planning what you are going to do
Reflection-WITH-action (action-reflection)	Freire (1970, 1973)	1. Conscious action 2. Action alone or with others

Several authors depict reflective thinking/inquiry as a cycle, circle or wheel. Notable examples here include the reflective learning cycle of Graham Gibbs (1988), which is also based on the Kolb/Lewin model, and has seven distinct stages shown below with their associated questions/prompts and presented graphically in Figure 2 (Gibbs, 2013, pp.49-50).

Figure 2: The reflective learning cycle (Gibbs, 2013, p.50)



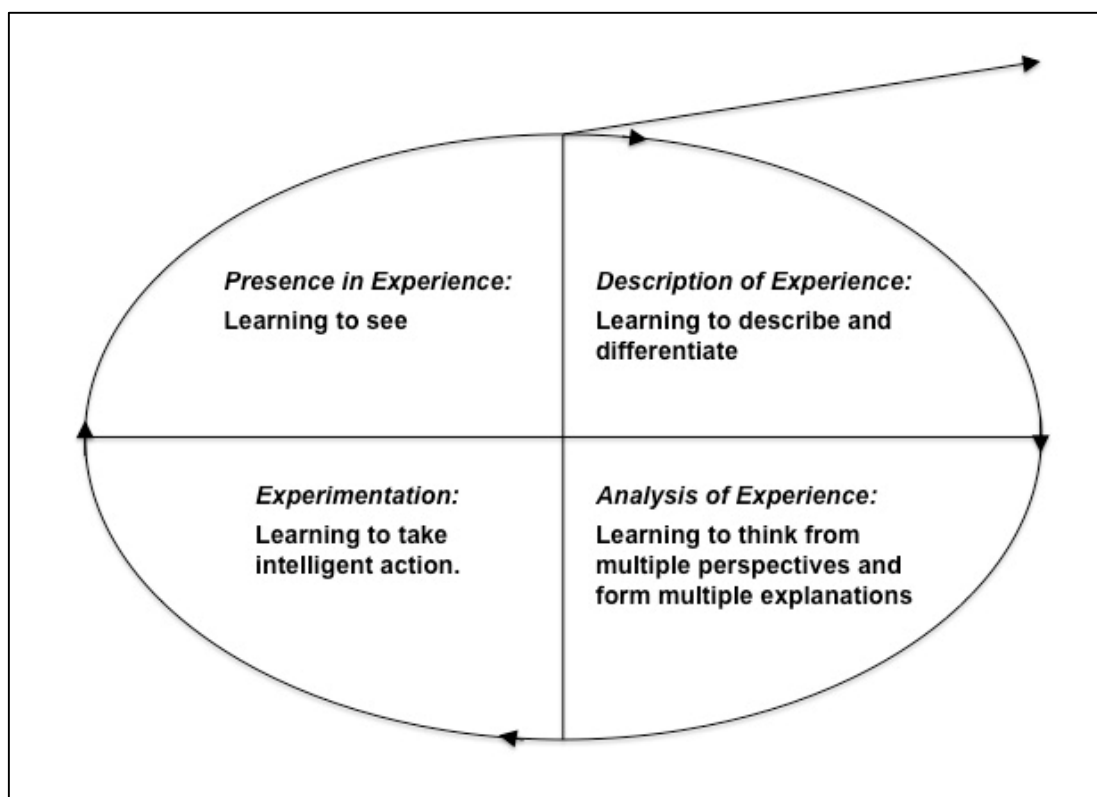
- **Description:** What happened? Don't make judgements yet or try to draw conclusions; simply describe.
- **Feelings:** What were your reactions and feelings? Again don't move on to analysing these yet.
- **Evaluation:** What was good or bad about the experience? Make value judgements.
- **Analysis:** What sense can you make of the situation? Bring in ideas from outside the

experience to help you. What was really going on? Were different people's experiences similar or different in important ways?

- **Conclusions** (general): What can be concluded, in a general sense, from these experiences and the analyses you have undertaken?
- **Conclusions** (specific): What can be concluded about your own specific, unique, personal situation or way of working?
- **Personal action plans**: What are you going to do differently in this type of situation next time? What steps are you going to take on the basis of what you have learnt?

Another example is the reflective cycle of Carol Rodgers (2002), which is derived from Dewey's (1933) concept of reflection, and is a four-phase process, as shown in Figure 3. Rodgers (2002, p.234) also references Schön's (1983) distinction between reflection in-action ("in the midst of experience") and reflection-on-action ("outside an experience"), observing that the latter "comes either before or after a given situation", i.e., acknowledging the notion of reflection-for-action. Significantly, she also points out that although her cycle is basically a linear model, "one may move both forward and backward through the process, especially between description and analysis".

Figure 3: The reflective cycle (Rogers, 2002, p.235)



Other scholars have differentiated particular types of reflection by their focus/purpose (i.e., the subject and/or object of the reflection). Such typologies may also be explicitly presented as linear or hierarchical models, showing different kinds of reflection as progressive stages or phases, representing successively deeper levels of analysis and interpretation. For example, Hatton and Smith (1995) draw on several earlier typologies to develop their five-level hierarchy, which they explicitly map to concepts described by Schön (1983), as shown in Table 3, which provides a summary version of their tabulation (reversing the layout to ascending order).

Table 3: Types of reflection and concerns (after Hatton & Smith, 1995, p.45)

Reflection type	Nature of reflection
Technical rationality	1. Technical (decision-making about immediate behaviours or skills), drawn from a given research/theory base
Reflection-on-action	2. Descriptive (social efficiency, developmental, personalistic), seeking what is seen as 'best possible' practice
	3. Dialogic (deliberative, cognitive, narrative) weighing competing claims and viewpoints, and then exploring alternative solutions
	4. Critical (social reconstructionist), seeing goals and practices of one's profession as problematic, according to ethical criteria
Reflection-in-action	5. Contextualization of multiple viewpoints drawing on any of the possibilities 1-4 applied to situations as they are actually taking place

Jack Mezirow (1991, pp.107, 108) distinguishes three types of reflection:

- *content reflection*: “reflection on *what* we perceive, think, feel, or act upon”;
- *process reflection*: “examination of *how* we perform these functions of perceiving, thinking, feeling, or acting and an assessment of our efficacy in performing them”; and
- *premise reflection*: “becoming aware of *why* we perceive, think, feel, or act as we do and of the reasons for and consequences of our possible habits of hasty judgment, conceptual inadequacy, or error in the process of judging”

Mezirow (1991, pp.108, 117) then explains that *premise* reflection involves *theoretical reflectivity*, which “may cause us to become critical of epistemic, social, or psychological presuppositions”, and “‘dialectic-presuppositional’ logic, a movement through cognitive structures guided by the identifying and judging of presuppositions”

Premise reflection is thus a form of critical reflection in the Friirian sense of the term, and also builds on and subsumes the other types of reflection described:

content and process reflection are the dynamics by which our beliefs – meaning schemes – are changed, that is become reinforced, elaborated, created, negated, confirmed, or identified as problems (problematized) and transformed. Premise reflection is the dynamic by which our belief systems – meaning perspectives – become transformed. Premise reflection leads to more fully developed meaning perspectives that are more inclusive, discriminating, permeable (open), and integrative of experience (Mezirow, 1991, p.111)

Brockbank and McGill (2007, pp.126-127) present a framework of five kinds of reflection as “different aspects of reflection [applicable] in different situations, at different times”:

1. Narrative reflection – *Return to an event and describe what happened*
2. Percipient reflection – *Think about the perceptions and reactions involved*
3. Analytical reflection – *Think about the situation*
4. Evaluative reflection – *Evaluate the experience*
5. Critical reflection – *Consider implications for the future*

Their table includes 4-5 prompts (questions) for each kind of reflection, along with 3-5 “demands”, and 3-4 assessment criteria. However, despite the apparent progression here from descriptive through analytical to critical reflection, Brockbank and McGill (2007, p.127) stress that the project team that developed the framework “viewed these aspects as differences of emphasis and not differences of level”.

The literature on reflective practice and reflective writing offers many similar frameworks that range from three to six levels or stages of reflection. Three-level models often draw on Habermas's epistemological theory of cognitive interests, which identifies three ways of knowing or forms of knowledge, represented by three corresponding types of reflection, frequently labelled as technical, practical, and critical (or emancipatory) reflection. Table 4 provides an approximate mapping of four such frameworks, showing how critical reflection is usually regarded as a more fully developed or advanced form of reflective thinking and practice.

However, it is important to note first that the term is not always used precisely – some commentators use it interchangeably with reflection on the basis that all reflective thinking should be critical thinking; and secondly that other proponents of reflective practice – notably those who resist hierarchical classification of the different types of reflection – emphasise that reflection should be seen as a situated, context-oriented practice, and so different forms of reflection may be more or less appropriate in particular circumstances. So, for example, in professional settings, there may be occasions when errors in technique or other pragmatic considerations should be the primary focus of attention rather than delving into unbounded questions about their cultural origins.

Table 4: Comparison of staged models of reflection

Level	van Manen (1977)	Sparkes-Langer et al. (1990)	Tauer & Tate (1998)	Taylor (2010)
0			Reflective person	
1	Technical rationality (applying knowledge)	No descriptive language	Reflective technician	Technical reflection (empirical knowledge, evidence-based practice; procedural focus, instrumental purpose)
2		Simple, layperson description		
3	Practical action (clarifying assumptions)	Events labeled with appropriate terms	Reflective professional	Practical reflection (interpretive knowledge, experiential learning; interpersonal focus, communicative purpose)
4		Explanation with tradition or personal preference given as the rationale		
5		Explanation with principle or theory given as the rationale		
6	Critical reflection (considering ethics)	Explanation with principle/ theory and consideration of context factors	Reflective citizen	Emancipatory reflection (critical knowledge power relationships; political focus, transformative purpose)

2.3 Domain methodologies

In addition to the primary literature on reflection, there is an evolving body of tertiary literature on reflective practice, which includes informative commentary, interpretative frameworks and extended practical guidance intended to help professionals in different disciplines navigate and assimilate the concepts and theories found in primary sources. The *Handbook of Reflection and Reflective Inquiry* aims to provide a “robust *state of the art review* of reflection and reflective inquiry for professional life and learning” and argues persuasively that reflection “needs to be introduced, scaffolded, and explicitly taught” across the professions (Lyons, 2010a, pp.v, xxv). While the collection of essays edited by Lyons (2010a) is a cross-cutting publication that includes contributions representing nine diverse professions, a key trend here is the development and

growth of discipline-specific guidebooks and handbooks that interpret the concepts and theories of reflective practice for professional workers in particular domains of practice, either offering bespoke, purpose-designed methodologies, techniques, and tools for their specified audience, or showing how methods from other fields have been adopted or could be adapted or repurposed for a particular community of practice.

The domain-based literature includes both solo-/co-authored textbooks and edited collections containing contributions from multiple authors. Education features prominently here (e.g., Brookfield, 1995; Pultorak, 2014; Sellars, 2014; Valli, 1992; Zeichner & Liston, 2014; Zwozdiak-Myers, 2012), but other caring and helping professions are also strongly represented, especially nursing and healthcare (e.g., Bulman & Schutz, 2013; Ghaye & Lillyman, 2010; Howatson-Jones, 2016; Johns, 2013; Stedmon & Dallos, 2009; Taylor, 2010), and social work (e.g., Bruce, 2013; Knott & Scragg, 2016; White, Fook & Gardner, 2006). Other specialties represented include early years practitioners (Brock, 2015; Hallet, 2013), psychotherapy and counselling (Bager-Charleson, 2010; Stedmon & Dallos, 2009), and the sport and exercise sciences (Knowles, Gilbourne, Cropley & Dugdill, 2014). In our own field, we can point to only one book with a specific focus on reflection, Reale's (2017) slim volume on *Becoming a reflective librarian and teacher*, which is a useful contribution to the sparse literature on reflective practice in information work, but does not offer the breadth or depth of treatment provided by the other examples noted.

3. Reflective practice in information work

3.1 Professional development

The value of reflection in continuing professional development (CPD) beyond graduate education for library and information workers is properly acknowledged and well documented, particularly in the UK. In 2011, I reported "A significant trend over the last ten years is the growing recognition within the library profession of the benefits of mentoring relationships, the importance of critical reflection and the value of reflective writing to professional development" (Corrall, 2011, p.246), having seen how both educators and practitioners had observed benefits from using reflective journals and other tools at individual and organizational level in a range of practice contexts, including subject liaison, information literacy instruction, and leadership development programmes. Alan Brine's (2009) introduction to the *Handbook of library training practice and development* sees "the ability to review and reflect on the training that has been undertaken" as an integral part of such development, and indeed it is a formal requirement for admission to the register of practitioners of CILIP: the Chartered Institute of Library and Information Professionals at all levels (Certification, Chartership, and Fellowship):

Only then can the individual gain the maximum benefit and make decisions about their needs and future developmental path. It is reflection that is key to the profession's practice; it forms part of the chartership and certification process at CILIP, as the individual is required to show that the training they have undertaken has been fully evaluated by them and used to re-engineer their developmental plans as required for their needs (Brine, 2009, p.9).

The CILIP handbooks supporting the registration process confirm the requirement for candidates to reflect on the development and application of their professional knowledge and skills; reflective writing forms a substantial part of the portfolio of evidence and documentation candidates must submit for each level of membership, including reflective annotation of both their CV and most recent job description, in addition to an evaluative statement showing how their application meets the assessment criteria, in which evaluation "should focus mainly on reflection". The handbooks all use the same wording to explain what this means, which is the closest they get to defining the concepts of reflection and reflective practice:

Reflective writing is your response to experiences, opinions, events or new information. It is a way of thinking to help you to explore your learning and gain self-knowledge.

Most importantly it is your personal reaction to the situations you encounter and is invaluable when aiming to get the most out of your learning experiences.

Reflective writing is not pure description, judgement, or instructions (CILIP, 2014, p.15).

The book produced to support candidates for all levels of registration does not formally define reflective practice, but expands on the handbook description, and offers more practical guidance, and a little theoretical background. The relevant chapter (on reflective writing) basically presents reflective practice as learning from experience (through reflection, evaluation, and application). However, Owen and Watson (2015) then elaborate the process as a four-stage cycle or spiral, referencing Kolb's (1986) model of experiential learning, and also providing variants of Driscoll's (1994) "three whats" tool (What? So what? Now what?), promoted in Rolfe's framework for reflective practice (Rolfe, 2011; Rolfe et al., 2001) with additional trigger questions to support reflective thinking and reflective writing. Although Schön (1983) is listed in their bibliography, Owen and Watson (2015) do not discuss his distinction of reflection-on-action from reflection-in-action – unlike Brine (2005) in his earlier book, who also includes reflection for action from Cowan's (1998) composite model.

Brine (2005, pp.4, 114) asserts that reflection is "crucial to the development of any professional career" and "exceptionally important to the modern library and information professional", but also an ability/skill that may need to be acquired by individuals who are not naturally reflective learners, and he suggests ways of improving the ability to reflect, including carrying out research that involves gathering data, producing arguments for and against a course of action, and writing a report or paper for professional presentation.

Some professional organizations in our field currently specify reflective skills in their competency statements; but the references to reflection are not prominent, and often buried in unlikely places. For example the Australian Library and Information Association (ALIA, 2014) includes "critical, reflective and creative thinking" among a list of 16 generic employability skills and attributes; while CILIP (2013, p.31) includes "The ability to problem solve and make decisions and to reflect and evaluate" as an element of strategic thinking and evaluation in the Leadership and Advocacy section of the Generic Skills component of its Professional Knowledge and Skills Base (PKSB), but reflection does not appear in the PKSB wheel that provides a visual overview of both the areas of professional and technical expertise and the generic skills and capabilities that together represent our core competence.

3.2 Teaching librarians

Reflection is frequently referenced in relation to the teaching role of librarians and their facilitation of student learning. In two seminal papers from Australia, Judy Peacock (2001, p.28) explains how "The shift of emphasis from training to education demands that the librarian attains a high level of educational credibility by demonstrating sound pedagogical knowledge and reflective practice", and Mandy Lupton (2002, p.82) similarly encourages both individual and collective reflection: "Critical reflection is a powerful tool for the improvement of teaching practice. Strategies include personal reflection, planning, observing and debriefing with colleagues and workshop debriefing." (Lupton, 2002, p.82) The Association of College & Research Libraries (ACRL, 2007, p.11) presents reflection on practice to improve teaching skills as a core proficiency for instruction librarians, and requires candidates applying for the teacher track of its Information Literacy Immersion Program to submit a 500-word statement, "reflect[ing] on your approach to teaching, what and who has influenced your teaching, and your teaching aspirations/goals". The program track has similar application requirements, but also specifies "Engage[ing] in ongoing reflective practice in order to create and sustain renewal and growth of information literacy program development and leadership" as a learning outcome, while the teaching with technology track specifies "Utiliz[ing] reflection and dialogue in order to foster a critical approach to instructional technology applications" (ACRL, 2017a).

ACRL's (2017b) revision of its 2007 Standards for *proficiencies for instruction librarians* has been reframed as a description of the *Roles and strengths of teaching librarians*, but continues to specify reflective practice among the attributes characterizing teaching librarians. "Creat[ing] an environment of positive learning, trust, and reflection" is listed as a strength for leadership roles, while a "commitment to professional development, lifelong learning and reflective practice" is one of the strengths for the teacher role, and "enthusiasm for teaching through reflective practice and exploration of new approaches to instruction" is seen as central to their lifelong learner role.

Claire McGuinness (2011, p.150) identifies reflective practice as one of ten key trends and concepts influencing the teaching role in academic libraries, and a theme of increasing prominence in library discourse (particularly in relation to teaching), but notes that despite professional recognition of its importance "there is still a comparatively small body of documentary evidence attesting to reflective practice in librarianship", echoing a recurring theme in the literature, which repeatedly questions whether librarians are prepared to engage in reflective practice. For example, John Doherty (2005, pp.12, 14) asserts that "Librarians, however, are not very reflective practitioners" and "not trained as either instructors or critical reflectors". Reale (2017, p.13) points out that the failure of librarians to engage in reflection limits their effectiveness in the classroom:

"The topic of reflection has been tossed about in the library literature, giving it some of the attention it deserves, but precious little of it addresses the necessary implication that librarians, if they want to use reflection with their students, should be reflective practitioners themselves."

Handbooks for teaching librarians generally promote a reflective approach to library instruction, but their coverage of the concept of reflection varies in extent and depth, particularly in the treatment of its theoretical basis. Blanchett, Powis and Webb (2011, p.6) reference the concept of reflection for both learner and teacher upfront, stating that the process of learning must be *reflective*, and that "reflecting on your practice and evaluating what you do are essential parts of teaching". However, although Reflection is one of their 101 tips for IL teachers, their short two-page section on the topic is all about enabling learners "to become effective reflectors" by encouraging student reflection, building time for it into teaching sessions (not just at the end), setting tasks to facilitate reflective writing, creating an open environment, and asking questions to prompt reflective thinking (Blanchett et al., 2011, p.36). Jo Webb and Chris Powis consistently emphasise the role of reflection in learning and its contribution to the development of librarians as teachers, advocating "personal reflection informed by feedback from learners and other parties" as a way of assessing and evaluating the effectiveness of teaching, suggesting "peer observation, reflective logs/diaries and mentoring relationships" as examples of ways of facilitating the process:

Teachers should be able to use a variety of methods to gain feedback during and after formal teaching. They should understand the basic principles underpinning good feedback and be able to place it within an overall process of reflection on their teaching (Webb & Powis, 2009, p.39).

Webb and Powis (2009) also encourage teaching librarians to reflect on how principles of diversity awareness and inclusive practice can be applied in a learning context. They give more examples of using reflective writing tasks to develop learner's transferable skills and reflective practice in their 2004 book on *Teaching information skills*, including reflective essays, and self- and peer-assessment of group work, and also elaborate on their suggested feedback methods, such as watching videorecordings of your teaching with a structured set of questions and using a self-assessment questionnaire to aid self-reflection. In their penultimate chapter, they revisit the concept of the reflective practitioner, referencing Schön's (1983) two modes of reflection, and confirming reflective practice and "its processes of iteration and objectivity" as "central to our vision of learning and teaching" (Webb & Powis, 2004, p.187). Later, they stress the importance of practitioner-based research into teaching and learning, noting its frequent neglect by librarians, and making an explicit link here with reflective practice. They urge more involvement not only in traditional areas of practitioner research, such as information behaviour and IL, but also in

pedagogical research, by seeking funding from relevant bodies or partnering others to do so: "Involvement in such research informs the researcher's own practice [as a teacher] and encourages the reflective process which is so important in teaching" (Webb & Powis, 2009, p.43).

Andretta (2008; 2009) similarly emphasises the role of reflection in developing or enhancing the professional practice of librarians as IL facilitators. She describes a course for IL practitioners where reflecting on the process and the impact on their professional development was explicitly specified as a learning outcome. The course used a portfolio for formative and summative assessment, which aimed to "enhance information literacy facilitation by fostering reflective practice on users' profiling, learning diversity and information literacy strategies to address these, as well as promoting a reflective attitude towards the participants' CPD" (Andretta, 2009, p.67). Reflective practice is characterised here as a "cycle...which starts with the identification of the CPD targets in relation to information literacy education and ends with an evaluation of the fulfilment of these targets on completion of the course", though she also notes that participant feedback showed that "such practice continues to inform the professional development beyond the confines of the course" (Andretta, 2008, p.152).

Andretta's earlier book for IL practitioners also promotes the model of the IL educator as reflective practitioner by explicit reference (Andretta, 2005, p.55), to "continuous reflection on practice by the educator, as advocated by Schön (1991)" and she models this effectively by showing how her own reflections on implementing IL education have enabled her to fine-tune her approach, enhance the quality of her teaching and increase student learning. Like other IL scholars, she emphasizes a pedagogical approach that places student reflection at the centre of an experiential learning model connecting reflective thinking with lifelong learning and adaptive practice. Andretta (2005) not only describes assignments used to develop reflective learning skills, but explains how modifying her instructional practice so that students were required to use a specific question-and-answer structure in their self-evaluation reports resulted in improved levels of self-analysis and use of examples illustrating learning; she also demonstrates the importance of providing guidance and support for students, before and after they attempt self-reflection tasks for self-assessment of learning (for instance by supplying examples of good and poor self-evaluations beforehand, and giving appropriate feedback afterwards). However, although she references Schön's work several times, she does not elaborate his concept of reflective practice beyond a basic characterization.

Three recent examples of books for teaching librarians are more explicit in their intent to encourage reflective practice, embed reflection in instructor development and instructional work, and extend both the use and understanding of reflection as an intentional daily habit and collegial practice (Booth, 2011; McGuinness, 2011; Reale, 2017). McGuinness (2011) views the adoption of a reflective approach and a "reflective attitude" as fundamental to the professional and personal development of librarians as teachers, and just as important as familiarity with the basic skills, knowledge, methods, and tools of instruction. She describes reflective practice as "a rolling, continuous process of self-questioning and observation, framed by an honest awareness of how one deals with the daily anomalies that crop up in teaching" (McGuinness, 2011, p.38), and discusses various strategies and tools for becoming a "reflective librarian", including the use of reflective journals for self-evaluation (and student evaluation) of teaching performance; participation in peer review of teaching, followed by post-review personal reflection; using blogs and formal publications to share personal experiences and reflections; and developing a teaching portfolio documenting evidence of your teaching approach, activities, and accomplishments.

McGuinness (2011) suggests the content for such a portfolio might include not only samples of "teaching artefacts", formal and informal feedback from students and colleagues, with reflective commentary on your perceived strengths, areas for development, and ideas for future work; but also, more significantly, a teaching philosophy statement. The latter suggestion is a particularly interesting and useful contribution to the teaching librarian discourse: developing a statement of teaching philosophy is a long established, frequently discussed, and well documented practice for teaching faculty in American higher education, with such statements routinely required as a distinct element for job applications, appointment reviews, and promotion cases for faculty positions

across the disciplines, and often also for proposals for teaching awards and educational/learning development grants (Booke & Willment, 2017; Brinthaup, 2014; Chism, 1998; Kearns & Sullivan, 2011; Owens et al., 2014; Ratnapradipa & Abrams, 2012; Schönwetter, Sokal, Friesen & Taylor, 2002). While particularly relevant for librarians seeking tenure-track/tenured positions and formal (or informal) academic status in higher education, Janelle Zauha (2008) argues persuasively that the process of developing a teaching philosophy statement has inherent value for all teaching librarians as a means of encouraging the habit and level of reflection required to become an effective teacher:

Conceptualizing a statement of teaching philosophy is a basic step in the direction of becoming a thoughtful practitioner. ... The act of writing requires structured reflection and a text serves as a persistent reminder of priorities and values (Zauha, 2008, p.65).

Zauha (2008) also explains how such statements can also have wider benefits for teams of teaching librarians, raise the profile of the library on campus, and make librarian contributions to the education mission of the institution more visible.

Like Webb and Powis (2004), McGuinness (2011) encourages teaching librarians to get involved in pedagogical research and apply for teaching development grants, but specifically promotes action research, which explicitly requires the practitioner-researcher to engage in reflection (as part of a systematic ongoing cycle of planning, acting, observing, and reflecting). She highlights “action research in practice” among her ten key concepts influencing the teaching role of librarians and makes useful connections here with the evidence-based library and information practice (EBLIP) movement, which promotes the use of three kinds of evidence to inform decisions: findings from existing formal research studies; data from informal observational and reflective activities; and research undertaken by practitioners themselves to investigate problems and/or evaluate practices in their workplace. McGuinness (2011) briefly mentions Dewey and Schön when introducing reflective practice, and also quotes contemporary education and library authors to support her promotion of reflectivity, but she does not explore the concept beyond a basic description.

The title of Char Booth’s book, *Reflective teaching, effective learning*, immediately signals her strong commitment to reflective practice. Booth (2011, p.xx) urges us to “reflect as you read” and like McGuinness (2011) ends each chapter with a set of reflection points, and also makes reflective practice a core element of her competency model/development framework for teaching librarians, which she describes as “instructional literacy”. (The other three components are educational theory, teaching technologies, and instructional design.) In addition, Reflect is the fourth phase of her USER method for library instruction design (following Understand, Structure, and Engage). Booth (2011, pp.xvii, 17, 171) variously describes reflective practice as “a process of understanding and shaping your skills and abilities as you teach, not just assessing your performance at the end of an interaction”, more simply as “pursuing instructor development as you teach or train”, and formally as “Instructor development strategies that observe and consider one’s own teaching effectiveness with the goal of improving the learner experience”.

Booth (2011) also references Schön (1987), and although she does not delve into the nuances and complexities of his conceptual framework, she extends her discussion of reflective practice into the territory of metacognition, self-reflection and self-assessment/self-questioning, and finally critical reflection and critical pedagogy, while managing to keep her explanations and examples at an accessible level. She suggests several useful reflective strategies for educators to adopt for developmental purposes, as well as strategies for facilitating reflection and higher-order critical thinking among learners, drawing on education and psychology literature for inspiration and illustration, but taking care to contextualise her advice for library practitioners.

Michelle Reale adopts a similar friendly conversational style, but gets her arguments across forcefully, such as not treating reflection as “just another ‘tool’” (Reale, 2017, p.xiii), moving beyond a technical focus, recognizing problems, challenging the *status quo*, and committing to *practising* reflection ourselves before we ask others to do so. Despite her informal approach, she also

manages to reference five widely cited theorists (Dewey, Argyris, Brookfield, Larrivee and Mezirow) in the first ten pages. She is a strong advocate of reflective writing/journaling, which she argues must be *modelled* (preferably using pen/pencil and paper), *mediated* (as people are often unsure not just *what* to write, but *how*), and accompanied by feedback. Reale's (2017) book offers concise practical guidance informed by authoritative sources and personal experience. She makes selective use of concepts, models and theories from the literature (notably, the reflection cycle, the reflexive loop, positive reflection/strengths-based reflective practice, transformative learning, and 4C scaffolding), citing more than 40 authors, but her anecdotes and preference for plain-English descriptions over formal definitions and complex explanations make the subject matter accessible.

Despite the deficiencies observed by Doherty (2005), McGuiness (2011), Reale (2017) and others, recent journal literature on library instruction provides some evidence of growing practitioner interest and engagement in reflection that models the behaviours advocated in teaching textbooks. Several case studies report the adoption of reflective/self-reflective/reflexive practices to plan, evaluate and improve instruction, identify professional development needs, and foster a reflective teaching culture, documenting the use of journaling, video-recording sessions, peer feedback, group discussion, assessment data, and a professional development framework as resources for reflection (Clairoux, Desbiens, Clar, Dupont & St-Jean, 2013; Gewirtz, 2014; Goodsett, 2014; Hussong-Christian, 2012; Kavanagh, 2011; Porter, 2014; Sinkinson, 2011; Woods, 2012).

3.3 Critical literacy

While Schön's (1983; 1987) conception of reflective practice has been the main entry point into reflection for teaching librarians via the guidebooks published in the past two decades, another parallel strand of literature on library instruction has promoted Freire's (1970, 1973) conception of critical reflection and given rise to an increasingly prominent critical pedagogy movement in the library and information community, encouraging alternative perspectives on both library instruction and IL. A series of papers by Kapitzke (2003), Swanson (2004), Simmons (2005), Elmborg (2006), Doherty (2007), Jacobs (2008), and O'Connor (2009) argue for librarians to use critical pedagogy, critical literacy, and critical theory to reform (and reframe) IL by shifting from a functionalist, technological, skills-based and product-oriented approach to a situated, ecological, context- and process-oriented approach that embraces higher-order thinking and empowers students as knowledgeable critical information users, and also assumes a serious commitment to "use theory as a means toward critical self-reflection and contextualization" (Jacobs, 2008, p.260), and develop "a critical practice of librarianship – a theoretically informed praxis" (Elmborg, 2006, p.198) "and a practice informed theory", in which "the instructional practices and the pedagogical theories inform and are informed by each other to create praxis (Jacobs, 2008, p.261). Troy Swanson (2004, pp.259, 264) suggested it was time for "an evolutionary step, perhaps a radical step", and asserted that "Critical literacy pushes students toward self-reflection, interpretation, understanding, and ultimately action". James Elmborg (2006, p.197) asked the central question:

Should librarians 'serve' the academy by teaching its literacy skills unquestioningly, or should librarians participate in the critical reflection undertaken by 'educators', a reflection that leads us to challenge, if necessary, the politics of academic exclusion, and to participate in the creation of new and better academic models?

Heidi Jacobs (2008, p.261) raised numerous burning questions in her widely cited paper on "reflective pedagogical praxis", including questions for both collective reflection and personal self-reflection, for example: "how do I teach information literacy?", "how do I become a reflective pedagogue?", and "how might I foster a reflective pedagogical environment in my library?"

Jacobs (2008, pp.261) makes a sustained and compelling case for IL practitioners to engage in "creative, reflective dialogue", arguing the need for "self-reflexivity" regarding pedagogical praxis.

If we are going to address the issues of librarians' roles within educational endeavors systemically, we, as a discipline, need to foster reflective, critical habits of mind

regarding pedagogical praxis within ourselves, our libraries, and our campuses ... habits of mind that prioritize reflective discussions about what it is that we are doing when we 'do' information literacy ... reflective conversations that have the power to transform our work as individual librarians and our work as a profession (Jacobs, 2008, pp.256, 258, 259).

She then elaborates her perspective on reflection in the context of the critical IL movement:

Thoughtful, creative, transformative reflection can also be related to immediate concerns or observations related to specific pedagogical moments or particular students, assignments, or the sociocultural moments or events that inform a broadly conceived educative experience (Jacobs, 2008, p.259).

Jacobs (2008, p.257) also considers the need to strengthen and refocus the educational preparation of librarians for pedagogical work, and issues a timely challenge to the professional education community, making it clear that graduate coursework needs to embrace both reflective practice and pedagogical theory:

However, as educational theory tells us, unless skills, practices, and ideas are used in relevant ways and developed in reflective creative environments, instruction and pedagogy courses in MLIS programs may suffer the same fate as decontextualized 'oneshot' information literacy sessions. ... Sound instructional strategies and techniques are an important part of teaching but they must be informed by an understanding of pedagogical theory and grounded in an understanding of broader educative initiatives occurring on our campuses.

Within a decade, critical IL and reflective pedagogical praxis have moved from a peripheral prospect to a core concern for teaching librarians, representing "a constructive unbalancing" and "the reflexive turn in information literacy" (Coonan, 2017, p.13). Andrew Whitworth (2012, p.39) urges a *reflective practitioner* approach to professional development for the IL educator, based on processes that "must develop an educational *praxis*: a dynamic between theory and practice, and subject to continuous reflection", elaborating an argument previously introduced in his 2009 book on *Information Obesity*. Whitworth (2012, p.51) lays out a continuing professional development prospectus for "the librarian-turned-professional educator", arguing that the teaching librarian "must incorporate into their practice not just an awareness of pedagogical practice, but *must be constantly critiquing the very nature of IL*". First on his list of eight suggestions is "helping educators to establish their own personal educational philosophies and preferences", echoing the earlier suggestion by McGuinness (2011) that teaching librarians should compile portfolios to document their teaching approach and construct a statement of teaching philosophy as part of that process.

Other significant requirements suggested by Whitworth (2012, p.51) include "ongoing development of IL through continuous investigation of its basic premises", "developing connections between members of communities of practice" (thus encouraging *collective* reflection and *participation* in ongoing collaborative learning), and "crossing the boundaries between the HEI and the external contexts, or communities, inhabited in the past, present or future by learners and teachers", encouraging both a critical perspective and a holistic conception of IL, which Whitworth (2014) carries through to his more recent book on *Radical Information Literacy*. Additional texts promoting critical information literacy, critical library instruction, critical librarianship, progressive librarianship, and radical librarianship show how the "critlib" movement has gathered momentum in the present decade (Accardi, 2013; Accardi, Drabinski & Kumbier, 2010; Downey, 2016; Gregory & Higgins, 2013; Schroeder, 2014). Critical reflection, including critical self-reflection or "self-critical reflection" is central to these emergent conceptions of IL and professional practice, and often involves instructors using reflective questions "to reflect intentionally on their work" and also posing reflective questions to students (Tewell, 2016).

Critical information literacy is one manifestation of a more general, global trend towards rethinking how IL should be defined and developed for the digital world of the 21st century. Several new or revised conceptions of IL foreground reflection; for example, Australian Christine Bruce (2008, p.viii) defines *Informed Learning* as “using information, creatively and reflectively, in order to learn”, while *A New Curriculum for Information Literacy* developed in the UK by Jane Secker and Emma Coonan (2011, pp.4, 6, 7), aims to “help undergraduate learners to develop a high-level, reflective understanding of information contexts and issues which will empower them with a robust framework for handling new information situations”, and describes reflection as a “key element of the curriculum”, which emphasises reflective learning and “opportunities for making reflective associations”. Thomas Mackey and Trudi Jacobson (2014, p.28) from the US emphasise both reflection and (self-)reflexivity in their reconception of IL as *Metaliteracy*:

A metaliteracy framework informed by metacognition supports a self-reflexive process that includes such activities as journaling, peer interaction, collaborative problem solving, and the use of social media tools for the original development of ideas and to continuously reflect on one’s own education (Mackey & Jacobson, 2014, p.28).

Other contemporary IL models that explicitly feature reflection, include Callison’s (2015, pp.51-53) recursive Information Inquiry cycle, where Reflection is one of five elements of the model (along with Questioning, Exploring, Assimilation, and Inference); and InFlow (Information Flow), in which Reflect is one of eight ways learners are encouraged to engage with information (McNicol, n.d.). In addition, the ACRL (2016) *Framework for Information Literacy for Higher Education* (like the 2017 framework of *Roles and Strengths of Teaching Librarians*) replaces a set of *Competency Standards* (ACRL, 2000), based on a list of prescribed skills, with a more flexible framework, in this case based on a cluster of interconnected concepts. The new *Framework* acknowledges its debt to Mackey and Jacobson (2014), explaining its dependence on the “core ideas of metaliteracy, with special focus on metacognition or critical self-reflection”, and redefines IL as a reflective process:

Information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning (ACRL, 2016, p.3).

Reflective discovery, reflective thinking, reflective participation, self- and social-reflection also feature in ACRL’s (2017c) white paper exploring *Global Perspectives on Information Literacy*, notably in Daniel Dorner’s chapter representing a developing countries perspective:

As the students self- and socially-reflect on what they have learned, their understanding of IL concepts will evolve, and their ability to use the composite IL concepts will increase, thus increasing the students’ ability to learn. IL in essence, becomes a continuum of learning (Dorner, 2017, p.53).

3.4 Learner support

Texts for teaching librarians generally recognise the need to facilitate and stimulate reflective learning in IL classes, offering strategies to encourage reflective, critical thinking, and advocating the use of reflective writing tasks of various kinds, including reflective essays, reflective journals, and reflective reports for self-analysis, self-evaluation and self-assessment (Andretta, 2005; Booth, 2011; McGuinness, 2011; Reale, 2017; Webb & Powis, 2004). McGuinness (2011) suggests using 10-minute reflections at the end of class sessions, and having students write asynchronous blog posts or wiki entries, while Reale (2017) adds concept maps, in-class writing, problem-solving reflection, research logs and research partners as other strategies/tools for consideration. In tandem with the relatively sparse embryonic literature on reflection by librarians to develop their teaching competence, there is a growing literature evidencing reflective learning initiatives in IL education, including the use of journals, reflective papers/presentations and other assignments

requiring reflective skills, metacognition and critical self-reflection (Barnhisel & Rapchak, 2014; Critten, 2015; Hoffman & LaBonte, 2012; Lahlafi, Rushton & Stretton, 2012; Lawal, 2013; Lefebvre & Yancey, 2014; McCulley & Jones, 2014; McKinney & Sen, 2012; McNicol & Shields, 2014; Talley, 2014). Significantly, several case studies reference contemporary IL models with reflective elements as the context for their educational initiatives.

4. Implications for research and practice

Our review has confirmed that reflection and reflective practice in the form of reflective thinking, reflective writing, reflective conversations and reflective learning, are generally recognised as an important dimension of library and information work, particularly in relation to IL education and development. However, evidence of serious commitment to reflective practice in the field is limited, and several commentators question whether library and information professionals are sufficiently engaged with reflection, also arguing that they graduate from professional education programs with inadequate preparation for roles as reflective teachers and learning facilitators (Doherty, 2005; Jacobs, 2008; McGuinness, 2011; Reale, 2017). Others call for wider discussion and fuller articulation of strategies for doing reflection and becoming reflective, or point to a need for cultural change – or at least more support – in library workplaces, to make reflection an integral part of regular reviews at individual, departmental, and organizational level (Greenall & Sen, 2016; Koufogiannakis, 2010).

Research also indicates a need for further guidance and/or tailored training to help practitioners identify methodologies, techniques and tools to suit their particular circumstances and fit their personal preferences or ways of working (Greenall & Sen, 2016). Michelle Reale's (2017) book offers the most comprehensive introduction to reflection for librarians to date; she has given us a good starter text, especially for people already working in the field, but it arguably still leaves a gap for a handbook providing more in-depth treatment of the subject in our professional context, with wider application beyond the information professional's role in teaching and learning that could serve as both a learning resource and reference work for novice and seasoned practitioners.

Three suggestions for action emerge here. The numerous guidebooks and handbooks produced for practitioners in other professions, notably education, health and social care, many of which are now in their third or fourth editions, suggest that domain-specific practical guidance is valuable and necessary to provide contextually situated information and advice and thereby improve the likelihood of embedding reflective practice in a profession. However, before attempting to produce any such guidance or any form of toolkit, or even starting to investigate what a reference resource on reflective practice for our field might contain or how it should be presented, we urgently need to put reflection/reflective practice up front and centre in our competency frameworks, rather than having the ability to reflect buried in a long list of generic skills and attributes. Reflective practice is not a core competence in the full sense of that term as defined by Prahalad and Hamel (1990): it meets their criteria of *extendibility* and *customer value* (broadly interpreted), as it has the potential to help the profession reach beyond its traditional sphere of activity, and to make a disproportionately significant contribution to the quality of our work; but reflection does not meet their third criterion of *competitive differentiation*, as it does not in itself distinguish us from other professions, and indeed many professionals in other areas seem farther ahead than information specialists in their journey to becoming reflective practitioners.

Professional competencies can be arranged and categorised in various ways. For example, Cheetham and Chivers (1998) define four core components (cognitive, functional, personal, and ethical competence, each with their own sub-components) that are surrounded by a set of five meta-competencies (communication, self-development, creativity, analysis, problem solving). Corrall (2005, p.35) suggests three broad categories of knowledge, skills and abilities: professional/technical (core competence), organizational/managerial (essential enablers), and personal/interpersonal (survival skills) presented as concentric circles; while SLA (2016), the Special Libraries Association, identifies only two types of *Competencies for Information*

Professionals, core and enabling competencies (neither of which includes reflection). In 2011, I argued that both reflection and mentoring could be classed as *meta-competencies*, defined as “a competency that is beyond other competencies, and which enables an individual to monitor and/or develop other competencies” (Cheetham & Chivers, 2005, p.109). Cheetham and Chivers (2005) actually give reflection the status of a “super-meta-competency”, because of its potential to help practitioners step beyond their other competencies and then analyse, modify, and develop them. Many commentators in our own field have similarly identified wider benefits from reflection beyond the personal and professional development of the individual, as it can also lead to improvements in work practices and service delivery, and thereby contribute to quality enhancement and organization development (Forrest, 2008; Sen, 2010).

The case for elevating reflection to the status of a *super-meta-competency* is arguably even more compelling now than six years ago. However, the specific proposal here is to use the theory and terminology of Meyer and Land (2003) from the pedagogical arena, and designate *critical reflection* as a *threshold competence* for the library and information profession. Readers will likely be familiar with their notion of “threshold concepts” as a framework for course design across the disciplines, because of its use in ACRL’s (2016) *Framework for Information Literacy*. Meyer and Land (2003, pp.1, 4) make an important and useful distinction between *threshold* and *core* concepts:

A threshold concept...represents a transformed way of understanding, or interpreting, or viewing something without which the learner cannot progress.

A core concept is a conceptual ‘building block’ that progresses understanding of the subject...but it does not necessarily lead to a qualitatively different view of subject matter.

This distinction between “core” and “threshold” *concepts* could usefully be applied to professional *competences*, enabling us to give critical reflection the special status it deserves. We can also justify the *threshold* designation by reviewing the five typical characteristics Meyer and Land (2003, pp.4-5) attribute to threshold *concepts*, which arguably are equally applicable to critical reflection as a threshold *competence*, namely that fully formed critical reflective practice is potentially transformative, irreversible, integrative, bounded, and troublesome.

In conclusion, the three suggested strategies for action to advance the reflective conversation in the library and information arena, and particularly in the IL community are:

- First, to prioritise reflective practice as an area for competency recognition and development, by designating critical reflection as a threshold competence for library and information workers, with the intention of convincing practitioners, employers, and other stakeholders that critical reflection is not an option, but *must* become integral to our professional and institutional culture and practice.
- Second, to produce contextually situated information, advice, and guidance for the library and information profession, with particular reference to the needs of IL practitioners, drawing on examples of good practice from other professions and related research literature, with the intention of providing learning and reference resources for initial and continuing professional education.
- Third, to conduct further research to inform the above strategies, which should include (but not be limited to) examining the role of reflection in library and information research and evaluation, exploring approaches to reflective practice in professional education, and testing the fitness for purpose and transferability of reflective methodologies, techniques, and tools used in other professional domains.

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